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EXAMINER

PATEL, VISHAL A

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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KONRAD ROEINGH and KARL KELLER

Appeal 2009-003313
Application 10/501,708
Technology Center 3600

Decided¹: June 12, 2009

Before JAMESON LEE, SALLY GARDNER LANE and SALLY C.
MEDLEY, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

A. STATEMENT OF THE CASE

SMS Demag AG (“SMS”), the real party in interest, seeks review under 35 U.S.C. § 134(a) of a Final Rejection of claims 1-6 and 8. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

References Relied on by the Examiner

Salter Jr. (“Salter ‘480”)	4,022,480	May 10, 1977
Salter Jr. (“Salter”)	4,099,731	Jul. 11, 1978

Rejections on Appeal

The Examiner rejected claims 1-6 and 8 as unpatentable under 35 U.S.C. § 103(a) over Salter and Salter ‘480.

Claims 1-6 and 8 stand or fall together. (Br. 6-10.)

The Invention

Rolling devices are used in rolling mills in the steel industry and nonferrous metal industry. The rolling devices include sealing devices in the area of the bearing of the load-bearing roll(s). (Spec. 1.) The invention relates to a sealing device for a rotatably supported roll.

SMS discloses, referring to SMS’s figure 2 reproduced below [numbers from figure 2 inserted], a sealing device [16] including at least two parts, a first sealing part [17] (shown shaded in dark grey) and a second sealing part [18] (shown shaded in light grey). (Spec. 5.) The second sealing part [18] is held in a pocket of the first sealing part [17]. (Spec. 6.)

SMS's figure 2 is below:

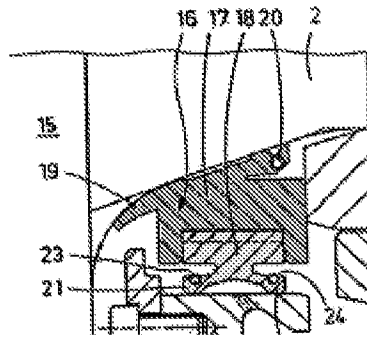


Figure 2 depicts a sealing device.

Claim 1, reproduced from the Claim Appendix of the Appeal Brief, reads as follows:

Sealing device (16) for a rotatably supported roll (15), the sealing device comprising at least one annular body, which is supported on a roll neck (2) and encompassing said roll neck, the annular body being provided with at least one outwardly extending lip (21; 22) that rests against and seals a stationary part (7) during rotation of the roll, wherein the annular body comprises at least two parts (17; 18), wherein a first part (17) rests against a part (2) of the roll (15), and a second part (18) comprises the at least one outwardly extending lip (21; 22), and wherein the second part (18) is held in a pocket of the first part (17), wherein the at least one lip is spring-supported.

B. ISSUE

Has SMS shown that the Examiner incorrectly found that Salter describes a sealing device that includes a second sealing part that is held in a pocket of a first sealing part?

C. FINDINGS OF FACT (“FF”)

1. Salter describes, referring to figure 1 reproduced below [numbers from figure 1 inserted], a seal assembly [34] including a neck seal [38] comprised of an inner body segment [38a] (shown shaded in dark

grey) and an outer body segment [38b] (shown shaded in light grey).
(Col. 3, ll. 31-38, 58-60.)

Salter's figure 1 is below:

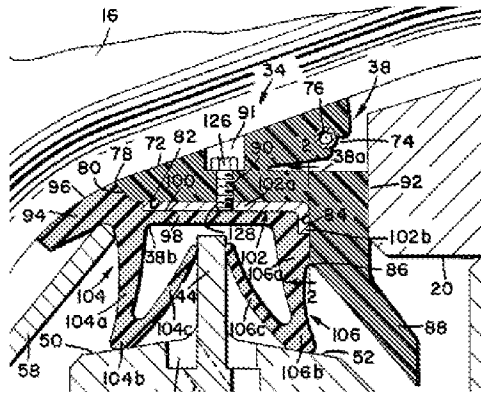


Figure 1 depicts a sealing device.

2. Inner body segment [38a] has an outer cylindrical segment [82] that extends to a perpendicular face [84]. (Col. 4, ll. 1-7.)
3. Outer body segment [38b] includes a circular groove [100] adapted to receive an L-shaped metallic band reinforcing element [102]. (Col. 4, ll. 15-23.)
4. During manufacturing, the outer body segment [38b] and the reinforcing band [102] are intimately and permanently bonded together. (Col. 4, ll. 35-38.)
5. The inner body segment [38a] and outer body segment [38b] are interconnected in sealing engagement with each other in a manner which prevents rotation of one segment relative to the other segment. (Col. 5, ll. 55-58.)
6. In the illustrative embodiment, inner body segment and outer body segment are interconnected by a machine screw [126] which extends radially outwardly through the holes [90] in the inner body segment [38a]. (Col. 5, ll. 58-62.)

D. PRINCIPLES OF LAW

“[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

E. ANALYSIS

Independent claim 1 recites (disputed limitations in *italics*): “the sealing device . . . comprises at least two parts . . . wherein the second part (18) is held in a *pocket* of the first part (17)” (Br. 12.)

The Examiner finds that Salter describes a seal [38] comprising two parts where the second part [38b] is held in a pocket of the first part [38a]. (Final Rejection 2; Ans. 3; *see* FFs 1-5) The Examiner interprets “pocket” to mean a cavity which is an unfilled space within a mass. (Ans. 4.) The Examiner finds that the first part [38a] has a pocket because it has a cavity that is formed by outer cylindrical segment surface [82] and perpendicular face [84]. (Ans. 4, 5.)

SMS argues that the Examiner incorrectly reads the Salter reference as describing a sealing element [38a] having a pocket into which sealing element [38b] fits. (Br. 7.) SMS argues that Salter does not describe a pocket because Salter only describes an L-shaped surface formed by outer surface [82] and perpendicular face [84] of sealing element [38a] on which sealing element [38b] can be laid. SMS also argues that sealing element [38b] is not in the sealing element [38a]. (Br. 8 (emphasis in Brief); *see* FFs 1-5.) SMS further argues that it is not possible to lay or set something in a

cylindrical outer surface since there is no depression or pocket. (Br. 8.)
SMS argues that perpendicular surface [84] prevents sliding of the sealing element second part [38b] to the right, but it can slide to the left. (Br. 8.)
SMS argues that sealing element second part [38b] is only prevented from sliding to the left by screw [126]. (Br. 8; *see* FFs 5-6.)

The Examiner agrees with SMS that the perpendicular face [84] and outer cylindrical segment surface [82], e.g., what the Examiner calls a “pocket”, forms an L-shaped element. (Ans. 5.) That is, the Examiner does not find or direct us to where, for example, the perpendicular face [84] extends around the sealing element second part [38b] or otherwise contains the second part. Thus, the question is whether the L-shaped element formed by the perpendicular face [84] and outer cylindrical segment surface [82] can reasonably be considered a pocket. We agree with SMS that it can not.

The Examiner interprets “pocket” to mean a cavity and that a cavity is an unfilled space within a mass. (Ans. 4.) However, even by this definition, the Examiner unreasonably determines that Salter’s L-shaped element forms an *unfilled space within a mass*.

A pocket or a space within a mass must have structural boundaries to form the space. Moreover, a pocket or an unfilled space within a mass must structurally be capable of containing the object(s) used to fill the space. The very definition of a cavity utilized by the Examiner implies that the space must contain the object(s) utilized to fill the space. The Examiner has failed to sufficiently demonstrate that Salter’s L-shaped element formed by the perpendicular face [84] and outer cylindrical segment surface [82] is reasonably capable of containing objects filling the space, e.g., the sealing element second part [38b]. Cylindrical surface [82] and perpendicular face

[84] are the only boundaries. The Examiner has not directed us to any additional boundaries, such as a second perpendicular face, that would prevent the sealing element second part [38b] placed in the space from leaving the space. Peripheral surrounding elements are needed to form an enclosure or contained space forming a pocket. As a result, the Examiner incorrectly found Salter's L-shaped element to be a "pocket" as claimed. As applied by the Examiner, Salter '480 does not make up for the deficiencies of Salter.

For all these reasons, the Examiner erred in determining that claims 1-6 and 8 would have been obvious over the prior art.

F. CONCLUSION

The Examiner incorrectly found that Salter describes a sealing device which includes a pocket.

G. ORDER

The decision of the Examiner rejecting claims 1-6 and 8 as unpatentable under 35 U.S.C. § 103(a) over Salter and Salter '480 is reversed.

REVERSED

sss

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